

In The Claims:

1. (original) A method for making an optical assembly, comprising the steps of:
providing a first submount having a standoff structure protruding from a first surface thereof;
pressing an optical emitter chip against the standoff structure such that at least said emitter chip deforms and said emitter chip contacts said standoff structure in a first plurality of contact portions of said standoff structure, said emitter chip having at least a first emitter;
bonding said emitter chip to said first submount;
juxtaposing an integrated optics chip against said standoff structure such that a first optical receiver of said integrated optics chip can receive optical energy emitted by said first emitter; and
bonding said integrated optics chip to said first submount.

2. (original) A method according to claim 1, wherein said first emitter is disposed on a subject edge of said emitter chip,
and wherein said standoff structure comprises a plurality of at least three segments which are mutually isolated from each other at least under said subject edge of said emitter chip, and which are arranged such that each segment includes a respective first portion which contacts said emitter chip and a respective second portion which contacts said integrated optics chip.

3. (original) A method according to claim 1, wherein said step of bonding said emitter chip to said first submount comprises the steps of:
applying an epoxy between two of said contact portions on said first submount; and
after said step of pressing, curing said epoxy.

4. (original) A method according to claim 1, wherein said step of bonding said emitter chip to said first submount comprises the steps of:
flowing solder between two of said contact portions on said first submount; and
after said step of pressing, cooling said solder.

5. (original) A method according to claim 1, further comprising the step of forming solder bumps between said contact portions on said first submount,

wherein said step of bonding said emitter chip to said first submount is performed as part of said step of pressing said emitter chip against said standoff structure.

6. (original) A method according to claim 1, wherein said step of bonding said emitter chip to said first submount comprises the step of applying an electrically conductive bonding material to an electrical trace disposed on said first submount between said contact portions, said bonding material being in electrical contact with an electrical connection pad on said emitter chip after said step of bonding said emitter chip to said first submount.

7. (original) A method according to claim 1, wherein said step of bonding said integrated optics chip to said first submount comprises the step of applying an electrically conductive bonding material to an electrical trace disposed on said first submount between said contact portions, said bonding material being in electrical contact with an electrical connection pad on said integrated optics chip after said step of bonding said integrated optics chip to said first submount.

8. (original) A method according to claim 1, wherein said first plurality of contact portions includes all points on said standoff structure which contact said emitter chip after said step of pressing, wherein said emitter chip includes a plurality of optical emitters arranged along a first edge of said emitter chip,

and wherein at least three consecutive ones of said contact portions along said first edge of said emitter chip are mutually isolated from each other along said first edge.

9. (original) A method according to claim 1, wherein said emitter chip is an optical emitter array chip having a plurality of optical emitters including said first emitter.

Cancel claims 10-114.

115. (original) A method for making an optical assembly, comprising the steps of:
providing a first submount having a standoff structure protruding from a first surface thereof;
pressing an optical array emitter chip against the standoff structure such that at least said emitter chip deforms and said emitter chip contacts said standoff structure in a first plurality of contact portions of said standoff structure, said emitter chip having a plurality of optical emitters;
bonding said emitter chip to said first submount;

juxtaposing against said standoff structure an optical fiber array having a plurality of optical fibers, such that a receiving end of each of said fibers can receive optical energy emitted by a respective one of said optical emitters, and

bonding said integrated optics chip to said first submount.

116. (original) A method according to claim 115, wherein said optical emitters are disposed on a subject edge of said emitter chip,

and wherein said standoff structure comprises a plurality of at least three segments which are mutually isolated from each other at least under said subject edge of said emitter chip, and which are arranged such that each segment includes a respective first portion which contacts said emitter chip and a respective second portion which contacts said optical fiber array.

117. (original) A method according to claim 115, wherein said step of bonding said emitter chip to said first submount comprises the step of applying an electrically conductive bonding agent to an electrical trace disposed on said first submount between said contact portions, said bonding agent being in electrical contact with an electrical connection pad on said emitter chip after said step of bonding said emitter chip to said first submount.

118. (original) A method according to claim 115, wherein said first plurality of contact portions includes all points on said standoff structure which contact said emitter chip after said step of pressing, wherein said plurality of optical emitters are arranged along a first edge of said emitter chip, and wherein at least three consecutive ones of said contact portions along said first edge of said emitter chip are mutually isolated from each other along said first edge.

119. (original) A method according to claim 115, further comprising the step of pressing said optical fiber array against said standoff structure after said step of juxtaposing, such that at least said optical fiber array deforms and said optical fiber array contacts said standoff structure in a second plurality of contact portions of said standoff structure.

120. (original) A method according to claim 115, wherein said step of juxtaposing includes the steps of:

activating a first one of said optical emitters to emit optical energy and monitoring optical energy captured by one of said optical fibers; and

repositioning said optical fiber array laterally relative to said first submount in response to said step of monitoring.

121. (original) A method according to claim 120, wherein said step of juxtaposing further includes the step of activating a second one of said optical emitters to emit optical energy and monitoring optical energy captured by a second one of said optical fibers,

and wherein said step of repositioning is performed further in response to said step of monitoring optical energy captured by a second one of said optical fibers.

122. (original) A method according to claim 115, wherein said emitter chip includes first and second opposite major surfaces, and wherein said step of pressing comprises the steps of:

affixing said first surface of said emitter chip to a compliant surface of a chuck;

moving said chuck such that said second surface of said optical component contacts said standoff structure; and

pressing said chuck toward said first submount until said emitter chip deforms to contact said standoff structure in said first plurality of contact portions.

123. (original) A method according to claim 115, wherein said first submount includes longitudinally-oriented recesses, and wherein said steps of juxtaposing and bonding said integrated optics chip to said first submount collectively comprise the steps of:

attaching each of said fibers in a longitudinally-oriented v-groove in the undersurface of a fiber holder; and

attaching said fiber holder to said first submount, said fibers depending below the undersurface of said fiber holder and into said recesses in said first submount.

124. (original) A method according to claim 115, further comprising the step of connecting an output end of one of said optical fibers to provide pump optical energy to an optical amplifier.

125. (original) A method according to claim 115, further comprising the step of connecting the output end of each of said optical fibers to provide pump optical energy to a respective optical amplifier.

Cancel claims 126-146.